

BEHAVIOR CHANGE IN THE FUNNY PAPERS: FEEDBACK TO CARTOONISTS ON SAFETY BELT USE

R. MARK MATHEWS

UNIVERSITY OF KANSAS

AND

MICHAEL DIX

HEAD INJURY ASSOCIATION OF KANSAS AND GREATER KANSAS CITY

A multiple baseline across 8 nationally syndicated cartoonists evaluated the effects of personal advocacy letters encouraging presentations of a specific prevention message—the depiction of safety belt use in comic strips showing motor vehicle occupants. During baseline these cartoonists depicted safety belt use in only 15% (6 of 41) of their strips with occupied vehicles, but following receipt of a personal letter requesting safety belt use 41% (42 of 102) of their strips depicted safety belt use. Four cartoonists showed clear and immediate increases in depiction of safety belt use, 2 demonstrated delayed and somewhat less consistent belt use, and 2 cartoonists showed no change. The approach and results are discussed with regard to advocacy efforts intended to influence presentation of prevention messages in the media.

DESCRIPTORS: cartoonists, community psychology, feedback, newspapers, safety belt use

In a special issue of the *Journal of Applied Behavior Analysis* on road safety, Geller (1991b) called for behavior analysts to engage themselves in a war for highway safety. Actually, behavioral researchers have studied various strategies to increase safety belt use among vehicle occupants at work sites (e.g., Geller, 1983; Hagenzieker, 1991; Ludwig & Geller, 1991), schools (Roberts, Fanurik, & Wilson, 1988; Williams, Thyer, Bailey, & Harrison, 1989), and throughout the community (e.g., Geller & Lehman, 1991; Seekins et al., 1988). Most of these interventions, however, demonstrated their effectiveness in a single setting or community and were designed to intervene directly with vehicle occupants.

An additional strategy might be to attempt low-cost, minimally intrusive interventions that could be implemented as broadly as possible (Berry & Geller, 1991; Geller, Ludwig, Gilmore, & Berry,

1990). Nationally syndicated newspaper features offer a broad-based communication medium that reaches people in every community in America. Gaining access to this medium for delivering such prevention messages, however, continues to be a major challenge (Winett, 1987).

Letter-writing campaigns represent a common approach to influencing public officials and decision makers (Cook, 1975). Seekins and Fawcett (1985) developed self-help guides for expressing opinions publicly, and these materials were found to be effective (Seekins, Fawcett, & Mathews, 1987). Geller (1988) reported that his nationwide petition and letter-writing campaign was effective in getting some television stars to use vehicle safety belts on prime time action shows. Similarly, cards or letters have been used to prompt sexual partners to seek treatment for sexually transmitted diseases (Montesinos, Frisch, Greene, & Hamilton, 1990) and to remind patients to keep appointments with their physician (Rice & Lutzker, 1984). A similar approach might be taken to influence the media to present a prosocial model of safety in everyday presentations of vehicle use.

Cartoonists frequently depict motor vehicle use. Influencing cartoonists to show their characters us-

Preparation of this manuscript was supported by a grant from the National Institute on Disability and Rehabilitation Research (G008006928) and the Kansas Department of Transportation (DE92-02-04). The authors wish to acknowledge the contribution of the staff and advisory board of the Head Injury Association of Kansas and Greater Kansas City. Requests for reprints should be directed to Mark Mathews, 4088 Dole, University of Kansas, Lawrence, Kansas 66045.

ing safety belts would place a positive model of risk reduction before millions of readers on a regular and repeated basis. This study was designed to evaluate the impact of a personal-advocacy approach (cf. Geller, 1989) to influence nationally syndicated cartoonists to depict safety belt use in their comic strips.

METHOD

Subjects

Eight nationally syndicated cartoonists served as subjects. Each published a strip daily in the *Kansas City Star*. The *Star* is a morning paper with a daily circulation of 287,261. Monday through Saturday, the *Star* prints 35 comic strips. Targeted cartoonists included Cathy Guisewite (*Cathy*), Jack Elrod (*Mark Trail*), Brad Anderson (*Marma-duke*), Chance Browne (*Hi and Lois*), Mort Walker (*Beetle Bailey*), Dean Young and Stan Drake (*Blondie*), Lynn Johnston (*For Better or for Worse*), and Hank Ketcham (*Dennis the Menace*).

Observation Procedures

An observer reviewed all 35 comic strips published Monday through Saturday in the *Kansas City Star* from February 1, 1990 to August 31, 1991. The observer obtained a copy of every comic strip that included a passenger in a motor vehicle. The *Star* maintains two copies of all newspapers published, Monday through Saturday, during the previous 6 months. One set is included in a "no-cut file," which can be reviewed by the public. A second set is included in a "cut file," from which the public is allowed to cut out and keep any item of interest. One of the authors went to the *Star* offices approximately every 3 months to remove all comic strips that depicted motor vehicle use from newspapers in the cut file. Over the course of the study, part or all the comic strip section was missing on only seven occasions from newspapers in the cut file. The comic strips published in that day's newspaper were subsequently checked in the no-cut file, and on one occasion a photocopy was made of a strip depicting motor vehicle use.

Occupant safety belt use was not scored if a vehicle was depicted but (a) no occupants were visible in any of the vehicles or (b) the vehicle was depicted as parked with one or more of the doors opened. Over the 19-month observation period, 22 different cartoonists portrayed occupied vehicles in 285 separate comic strips. Of these, 144 (51%) were published by the cartoonists serving as subjects in this study.

The first author marked the publication date on each comic strip and sorted all strips chronologically by cartoonist. He also served as the primary observer and scored each comic strip for safety belt use. Using a checklist that identified the comic strip and its publication date, the observer scored the comic strip as an occurrence of safety belt use with a plus (+) whenever one or more of the passengers in the vehicle was using a safety belt or was secured in a child passenger safety device, or scored the strip as a nonoccurrence of safety belt use with a zero (0) whenever none of the passengers used a safety belt or child passenger safety device.

As a measure of interobserver agreement, an undergraduate student served as the second observer and independently scored all comic strips depicting a motor vehicle for occupant safety belt use. Both observers agreed on occupant safety belt use in 40 of the 41 comic strips published by the targeted cartoonists that depicted safety belt use (98% occurrence reliability) and 141 of the 143 comic strips that did not depict safety belt use (99% nonoccurrence reliability). The observers agreed on all 27 comic strips published by nontargeted cartoonists that depicted safety belt use (100% occurrence reliability) and 110 of the 114 comic strips that did not depict safety belt use (96% nonoccurrence reliability).

Advocacy Letters

Throughout this study, the second author was employed by the Head Injury Association of Kansas and Greater Kansas City (HIA) as director of a school-based head and spinal cord injury prevention project. Following the appearance of an unbelted passenger in one of the targeted comic strips, he

wrote the cartoonist a personal letter on HIA letterhead. Each letter was written and mailed within 1 day of the publication of the comic strip. These letters followed Seekins and Fawcett's (1985) recommendations on how to write a letter to the editor. Each letter (a) was addressed to the cartoonist (e.g., Ms. Lynn Johnston, *For Better or for Worse*, % Universal Press Syndicate, 4900 Main Street, Kansas City, MO 64112); (b) included a personal introduction (e.g., I'm a regular reader of your work, and I enjoy it very much—especially as Michael becomes more and more like my older sons!); (c) stated the problem (e.g., I urge you to make a small change in your strips that involve motor vehicle operation—such as the one that appeared in this morning's edition of the *Kansas City Star*—in which none of the passengers was using a vehicle safety belt.); (d) included a copy of the comic strip referred to in the letter; (e) explained why this change is important and stated an opinion about what should be done (e.g., I realize your purposes are oriented more toward entertainment than education, but it would be wonderful if you would help us educate our fellow citizens—and your readers—about the benefits of safety belt use. Of course, it would be nice if this could be done in an overt, direct manner by devoting actual script copy to the subject. But, even if you just depict your characters using safety belts on a consistent basis—as a normal component of a healthy, proactive lifestyle—you could do much to underscore the message that safety belt use is commonplace and common sense.); and (f) signed the letter and indicated his position of Director of the HIA Head and Spinal Cord Injury Prevention Program.

Two of the cartoonists (Jack Elrod, *Mark Trail*; and Chance Browne, *Hi and Lois*) responded to the advocacy letter by writing back to indicate that they would depict future vehicle passengers using safety belts, but they failed to do so consistently. A representative for Brad Anderson (*Marmaduke*) also responded to the initial advocacy letter. A follow-up advocacy letter was mailed to these 3 cartoonists encouraging them to depict future vehicle passengers using safety belts. A "thank you"

letter was mailed to each cartoonist following the first depiction of safety belt use by one of their cartoon characters.

Experimental Design

This letter-writing campaign was conducted in a multiple baseline design across cartoonists. Personal letters, each including a consistent message, were sent to each of the 8 targeted cartoonists. Letters were sent to Cathy Guisewite (July 18, 1990), Jack Elrod (July 23, 1990, and December 20, 1990), Brad Anderson (July 23, 1990, and August 21, 1990), Chance Browne (August 20, 1990, and December 1, 1990), Mort Walker (August 21, 1990), Dean Young and Stan Drake (August 22, 1990), Lynn Johnston (February 13, 1991), and Hank Ketcham (June 29, 1991).

RESULTS

Six cartoonists (Guisewite, *Cathy*; Elrod, *Mark Trail*; Browne, *Hi and Lois*; Young, *Blondie*; Johnston, *For Better or for Worse*; and Ketcham, *Dennis the Menace*) wrote a personal response to the advocacy letter. Each cartoonist indicated willingness to depict safety belt use in future comic strips. In addition, the Director of Comic Art for the United Feature Syndicate replied that she had forwarded our letter to Brad Anderson (*Marmaduke*). These responses from the cartoonists were dated 7 to 95 days ($M = 30$) after the original advocacy letter requesting safety belt depiction. Mort Walker (*Beetle Bailey*) was the only cartoonist who did not respond. It is not known if he received the advocacy letter mailed to him at King Features Syndicate.

Figure 1 shows safety belt use in the eight cartoon strips. In *Cathy*, safety belts were depicted in only one baseline strip. However, the strip published 13 days after the letter encouraging safety belt depiction included a safety belt, as did 11 of the next 12 strips that included an occupied vehicle. *Mark Trail* showed more delayed and less consistent belt use following initial and follow-up letters. The first *Mark Trail* strip to depict safety belt use was

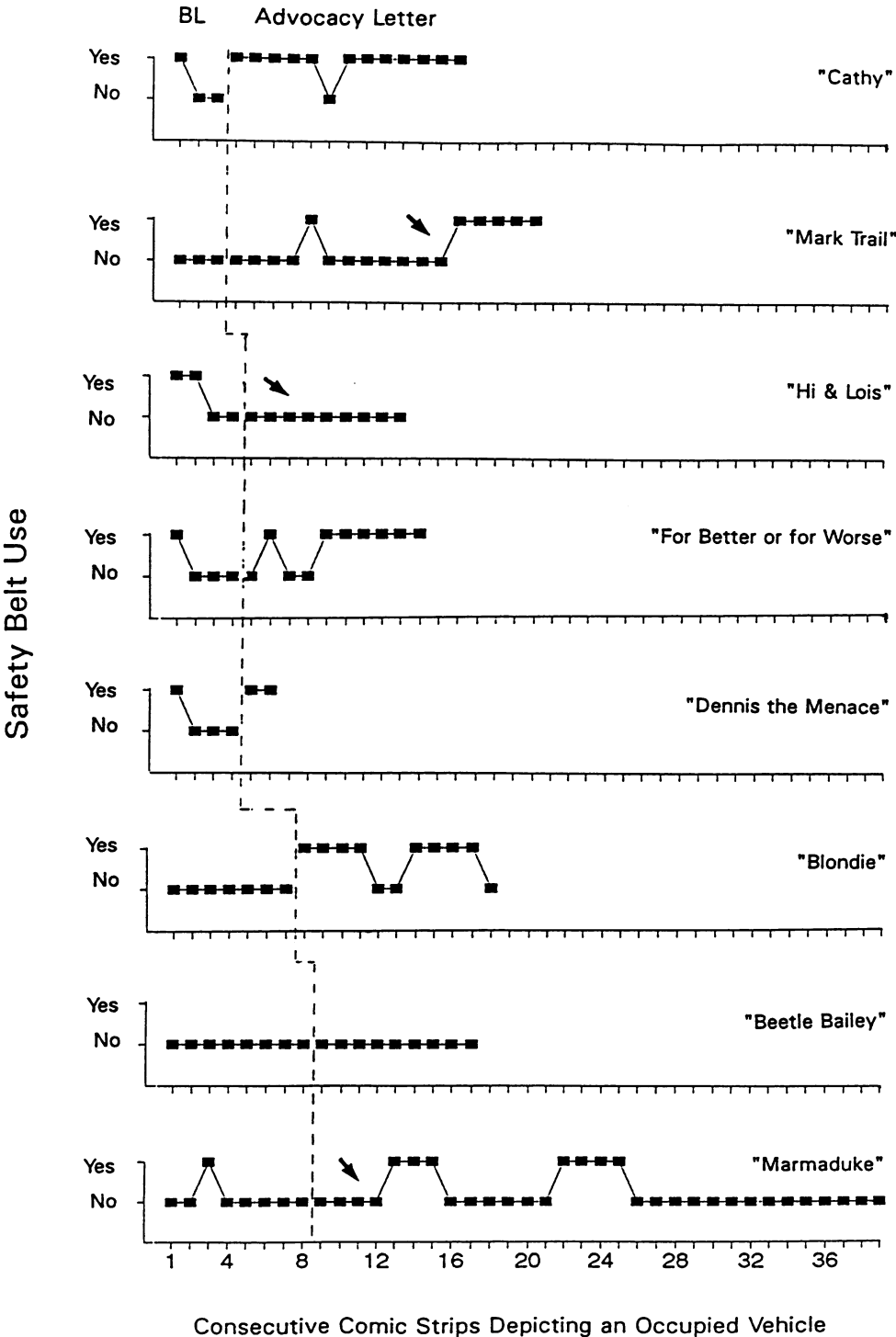


Figure 1. Safety belt use in consecutive comic strips depicting occupied vehicles. The vertical dotted lines indicate the point at which a personal advocacy letter was sent to the cartoonist encouraging depiction of passengers using safety belts in future cartoons. Arrows indicate the point at which a second advocacy letter was mailed to the cartoonist.

published 140 days after the initial letter; however, all five strips published after the follow-up advocacy letter depicted safety belt use.

Chance Browne responded to the initial letter requesting safety belt use in *Hi and Lois* within 9 days. His response acknowledged the error in not including safety belts and noted that it would not happen again. In addition, he returned a copy of the comic strip identified in the advocacy letter—with all passengers using safety belts. However, none of the nine subsequent *Hi and Lois* strips with vehicle occupants depicted safety belt use. Lynn Johnston (*For Better or for Worse*) also responded within 9 days of the initial letter. One strip without safety belts was published before her response; she subsequently included safety belts on *For Better or for Worse* characters in 8 of her next 10 strips with occupied vehicles.

Although only one of Hank Ketcham's (*Dennis the Menace*) four baseline strips included belted passengers, both strips including occupied vehicles published after the initial advocacy letter depicted safety belts in use. Dean Young (*Blondie*) provided a personal response to the advocacy letter and depicted vehicle occupants using safety belts in 9 of his next 11 strips with occupied vehicles. Mort Walker (*Beetle Bailey*) was the only cartoonist who did not respond to the advocacy letter. Safety belts were never depicted in any of his 8 baseline or 10 postintervention comic strips. Finally, the first postbaseline *Marmaduke* strip to depict safety belt use was published 44 days after the advocacy letter was mailed. It is noteworthy that the initial response to our advocacy letter was not from the cartoonist, and indicated only that the letter would be forwarded to him.

Thus, 4 of these nationally syndicated cartoonists showed clear and immediate increases in depicting safety belt use. Two others demonstrated somewhat more delayed and less consistent use, and 2 showed no change in safety belt use. During baseline these cartoonists depicted safety belt use in only 15% (6 of 41) of their strips with occupied vehicles; however, following receipt of a personal letter requesting safety belt use, 41% (42 of 102) of their strips depicted safety belts.

Of the 14 other cartoonists who published strips in the *Star* depicting occupied vehicles, only 19% (27 of 141) of their strips depicted safety belt use by vehicle occupants. Three cartoonists accounted for 59% of these depictions of safety belt use; *Family Circus* (four of four), *Garfield* (six of eight), and *Marvin* (six of eight). Thus, the remaining 11 cartoonists depicted safety belt use in only 9% (11 of 121) of their strips with occupied vehicles.

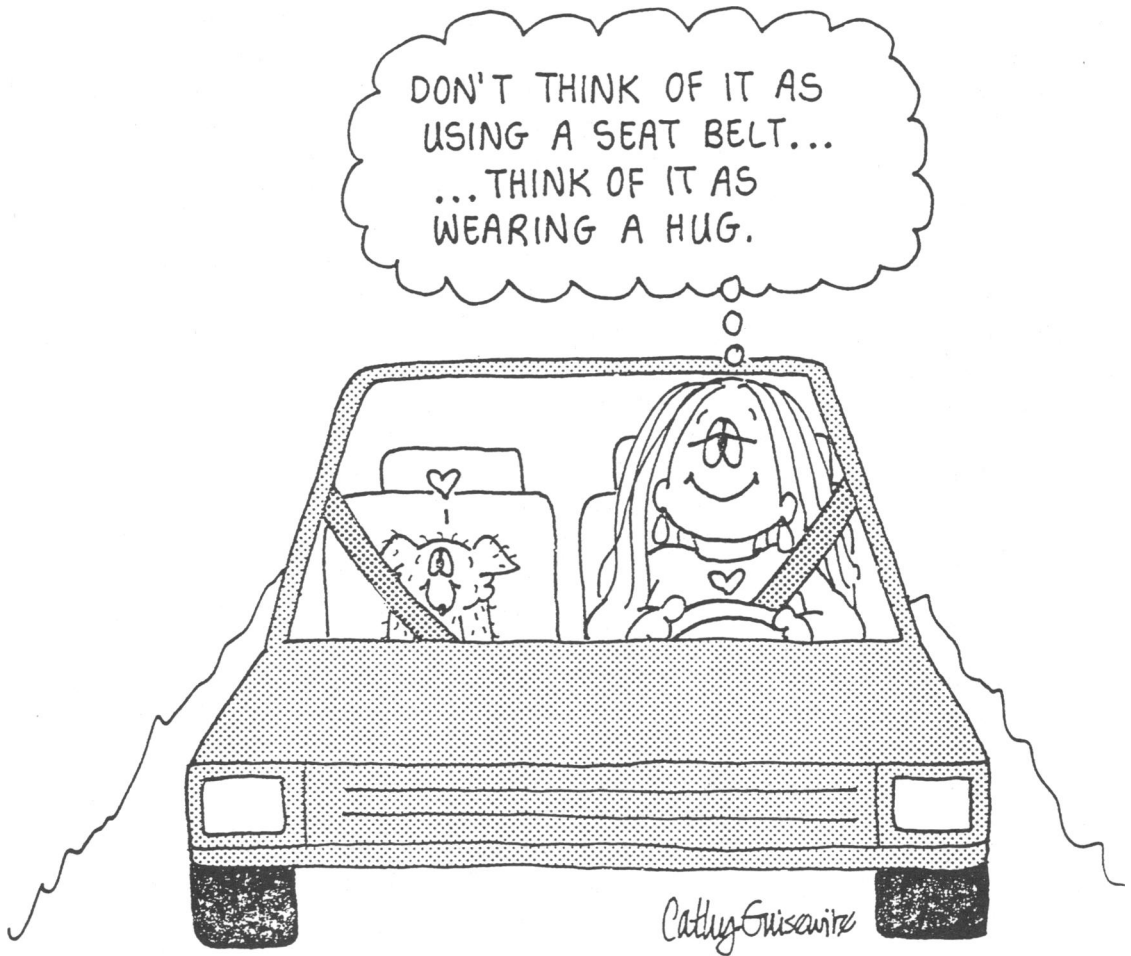
DISCUSSION

Results suggest that the personal letter-writing campaign was effective in influencing some cartoonists to depict safety belt use in their comic strips. When cartoonists depict safety belt use, they provide a model of behavior to reduce the risk of injury. Although the individual effects of such prevention messages may be weak, the subjects' comic strips are published in thousands of newspapers across the country and may influence millions of people nationwide.

Many cartoonists prepare material several weeks (or sometimes months) in advance of actual publication. It is possible, therefore, that the 2 cartoonists who showed more delayed responses to the advocacy letters had already prepared copy in advance and were not willing to go back and make changes in previously prepared comic strips. Actually, the cartoonists' quick and consistent responses to the advocacy letters were surprising. Five cartoonists wrote a prompt, personal response. Some delays were inevitable, however, as one cartoonist's response had a West Africa postmark.

It is unknown whether similar response patterns would be found if a similar campaign targeted other media professionals. Television writers, producers, and directors may receive a much heavier volume of mail than cartoonists. Other forms of entertainment (e.g., television shows) typically involve multiple decision makers, thus making it much more difficult to target any one person who could efficiently implement a change in policy. Comic strips, however, are often the product of a single artist.

In his response to a similar advocacy letter that focused on other high-risk activities depicted in



©1990 CATHY GUISEWITE

Figure 2. Original artwork prepared for the school-based head and spinal cord injury prevention project.

Calvin and Hobbes (Calvin preparing to do a back dive from the top of a ladder into a small inflatable swimming pool), Bill Watterson mentioned that his goal was merely to entertain his readers and that he wasn't trying to be an educator. Thus, it is critical that this type of advocacy letter be phrased in such a manner so as not to suggest that artists have an obligation to turn their strips into a propaganda piece for vehicle occupant protection or any other worthwhile cause. The majority (75%) of the cartoonists targeted in this study, however, responded to the advocacy letter in a very positive manner, indicating a willingness to "do the right thing."

In addition to personal letters agreeing with the need for depiction of safety belt use, 4 cartoonists provided original artwork for the school-based Head

and Spinal Cord Injury Prevention Project conducted by the Head Injury Association of Kansas. Figure 2 provides an example of original artwork provided by Cathy Guisewite (*Cathy*) that is currently used in HIA presentations. In addition, original artwork depicting a positive safety belt message was provided by Bil Keane (*Family Circus*), Lynn Johnston (*For Better or for Worse*), and Hank Ketcham (*Dennis the Menace*).

Although evaluation of any impact that depicting vehicle safety belt use among cartoon characters might have on actual safety belt and child safety seat use was beyond the scope of this study, it is a critical topic for future research. Winett (1987) offered many instructive design considerations for research evaluating this type of media presentation.

This study suggests that through "actively caring" (Geller, 1991a), individuals can make an impact on the broader world around them. This simple intervention was accomplished because one individual personally cared about media depictions of vehicle safety belt use and was willing to take the time and effort to act on his concerns. Through a series of these small wins (Weick, 1984), individuals can truly make a difference in the "war" to improve highway safety. When readers regularly receive the message through comic strips published in their newspapers that using a vehicle safety belt is normative, desirable, and appropriate behavior, an overall climate of road safety may be approximated.

REFERENCES

- Berry, T. D., & Geller, E. S. (1991). A single-subject approach to evaluating vehicle safety belt reminders: Back to basics. *Journal of Applied Behavior Analysis*, **24**, 13-22.
- Cook, J. B. (1975). Advocacy of grassroots citizenship. *Journal of the Community Development Society*, **16**, 22-29.
- Geller, E. S. (1983). Rewarding safety belt usage at an industrial site: Tests of treatment generality and response maintenance. *Journal of Applied Behavior Analysis*, **16**, 189-202.
- Geller, E. S. (1988). A behavioral science approach to transportation safety. *Bulletin of the New York Academy of Medicine*, **61**, 632-661.
- Geller, E. S. (1989). The airline lifesaver: In pursuit of small wins. *Journal of Applied Behavior Analysis*, **22**, 333-335.
- Geller, E. S. (1991a). If only more would actively care. *Journal of Applied Behavior Analysis*, **24**, 607-612.
- Geller, E. S. (1991b). War on the highways: An international tragedy. *Journal of Applied Behavior Analysis*, **24**, 3-7.
- Geller, E. S., & Lehman, G. R. (1991). The buckle-up promise card: A practical intervention for large-scale behavior change. *Journal of Applied Behavior Analysis*, **24**, 91-94.
- Geller, E. S., Ludwig, T. D., Gilmore, M. R., & Berry, T. D. (1990). A taxonomy of behavior change techniques for community intervention. *The Community Psychologist*, **23**(2), 4-6.
- Hagenzieker, M. P. (1991). Enforcement or incentives? Promoting safety belt use among military personnel in the Netherlands. *Journal of Applied Behavior Analysis*, **24**, 23-30.
- Ludwig, T. D., & Geller, E. S. (1991). Improving the driving practices of pizza deliverers: Response generalization and moderating effects of driving history. *Journal of Applied Behavior Analysis*, **24**, 31-44.
- Montesinos, L., Frisch, L. E., Greene, B. F., & Hamilton, M. (1990). An analysis of an intervention in the sexual transmission of disease. *Journal of Applied Behavior Analysis*, **23**, 275-284.
- Rice, J. M., & Lutzker, J. R. (1984). Reducing noncompliance to follow-up appointment keeping at a family practice center. *Journal of Applied Behavior Analysis*, **17**, 303-311.
- Roberts, M. C., Fanurik, D., & Wilson, D. (1988). A community program to reward children's use of seat belts. *American Journal of Community Psychology*, **16**, 395-407.
- Seekins, T., & Fawcett, S. B. (1985). Consumer involvement: Expressing opinions publicly. *Journal of Rehabilitation*, **51**(2), 75-76.
- Seekins, T., Fawcett, S. B., Cohen, S. H., Elder, J. P., Jason, L. A., Schnelle, J. F., & Winett, R. A. (1988). Experimental evaluation of public policy: The case for state legislation for child passenger safety. *Journal of Applied Behavior Analysis*, **21**, 233-243.
- Seekins, T., Fawcett, S. B., & Mathews, R. M. (1987). Effects of self-help guides on three consumer advocacy skills: Using personal experiences to influence public policy. *Rehabilitation Psychology*, **32**, 29-38.
- Weick, K. E. (1984). Small wins: Redefining the scale of social problems. *American Psychologist*, **39**, 40-49.
- Williams, M., Thyer, B. A., Bailey, J. S., & Harrison, D. F. (1989). Promoting safety belt use with traffic signs and prompters. *Journal of Applied Behavior Analysis*, **22**, 71-76.
- Winett, R. A. (1987). Prosocial television for community problems: Framework, effective methods, and regulatory barriers. *Prevention in Human Services*, **5**(2), 117-160.

Received June 25, 1992

Initial editorial decision July 23, 1992

Revision received August 25, 1992

Final acceptance August 25, 1992

Action Editor, E. Scott Geller